BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Transmitted Via Electronic Mail

September 16, 2005

Ms. Shari Kolak
Remedial Project Manager
EPA Region 5 (SR-6J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Re: Comments on Willow Boulevard/A-Site Operable Unit Proposed Plan
Kalamazoo River Superfund Site
Kalamazoo, Michigan
BBL Project #: 645.81/82.690 #2

Dear Ms. Kolak:

On behalf of Georgia-Pacific Corporation and Millennium Holdings LLC, Blasland, Bouck & Lee, Inc. (BBL) has reviewed the Proposed Plan prepared by the Environmental Protection Agency (EPA) for the Willow Boulevard/A-Site Operable Unit (WB&A-OU) of the Kalamazoo River Superfund Site in Kalamazoo, Michigan. The comments on the Proposed Plan, presented below, reiterate some of the concerns previously identified for the Remedial Investigation/Focus Feasibility (RI/FFS) prepared by the Michigan Department of Environmental Quality (MDEQ).

Application of Sediment Criteria to Soil

The Proposed Plan summarizes an evaluation of risk to human and ecological receptors that was presented in the WB&A-OU RI/FFS prepared by the MDEQ. In the final WB/A-OU RI/FFS, a sediment criterion of 0.33 mg/kg for polychlorinated biphenyls (PCBs) is used as a cleanup objective for soils in regulated wetlands. The criterion has its basis in the Human Health Risk Assessment (HHRA) based upon consideration of the level of PCBs in sediment necessary to protect subsistence and central tendency sport fish consumers, and also the detectability of PCB in soil. According to MDEQ the 0.33 mg/kg is the detection limit for PCBs in soils, which is greater than the criteria calculated (0.04 mg/kg for subsistence anglers and 0.30 mg/kg for central tendency anglers) in the HHRA. On page 6-5 of the RI/FFS, it is stated that this criterion is exceeded in surficial soils at, for example, the AMW-3A area and other areas only infrequently inundated.

This sediment criterion referenced in the RI/FFS was developed as a Preliminary Remediation Goal (PRG) for sediments in the Baseline Ecological Risk Assessment (BERA). A simple model of partitioning of PCBs between sediment and the overlying water column and bioaccumulation in fish was used to calculate no-effect- and lowest-effect-based PRG. This underlying model does not apply to soils that may infrequently be submerged. The model is only reasonably applied to sediments in an aquatic ecosystem. There is no defensible scientific basis for applying this sediment criterion to soils.

Placement of Residuals in Willow Boulevard Site

We recommend that EPA consider rewording the description of historical disposal at the Willow Boulevard site. Page 3 of the Proposed Plan indicates that paper residuals disposed at the Willow Boulevard site were placed directly into the river. This is not accurate. As seen on the attached 1950 aerial photograph (Figure 1), channel islands were well-established in this area of the river long before the disposal of residuals. A substantial portion of the residuals were placed over the islands themselves, not into water as implied in the Proposed Plan.

Selected Alternative

We recommend that EPA retain flexibility in the Record of Decision (ROD) to allow the limited use of sheetpile to protect the ecologically-friendly habitat elements to be constructed as part of the final remedy.

The Proposed Plan description of EPA's preferred alternative states that an eco-friendly dike will be installed along the perimeter of the Willow Boulevard site. However, the northeast area of the Willow Boulevard site faces upstream, and as such, is most subject to the considerable erosive forces of the river. Although ecologically-friendly stabilization features may be desirable along the berm of the site from the perspective of increased habitat functionality, these features are not expected to be sufficiently resistant to the shear stresses and ice flows of the river that occur during extreme events. To ensure the long-term integrity and permanence of the site and to adequately mitigate the potential for release of PCBs to the river, an engineered structure such as sheetpile may be necessary along that a portion of the berm that is most susceptible to erosion. A preliminary layout of recommended sheetpile alignment is shown on the attached Figure 2.

Limited information is provided in the Proposed Plan for the "ecologically friendly" and "setback" components of the EPA's preferred alternative. Following is a preliminary description of what those components might entail.

Ecologically friendly stabilization methods (also routinely called soft engineering and/or bio-engineering) most often include live plantings (e.g., willow trees, red-osier dogwood) which serve the same purpose as conventional hard-lined channel revetment (e.g., concrete, riprap), while providing a more natural appearance and increased riparian habitat function. In many successful installations, particularly on larger river systems, such soft engineering techniques are used in concert with hard armoring, providing greater protection as well as improved aesthetic and habitat benefit.

Typical soft engineering installations feature:

- Shallow bank slopes that rise gently back from bank-full elevations (as required to ensure stability of those soft engineering measures that cannot withstand the same erosive forces as can be accommodated by steeper hard-lined banks);
- Live plantings (e.g., grass, seeded erosion control blankets, live stakes or immature trees) which develop into ground/soil cover, the roots of which provide strength to bank soils; and
- Natural appearance and gradual transition into surrounding environment.

Other ecologically friendly installations that may be used with less spatial frequency include:

- Log revetments – bank toe armored with fallen or imported logs, sometimes installed with limbs left intact to provide in-stream cover or refuge; and

- Log lunkers – engineered stream overhangs that armor banks against higher flows, and provide in-stream cover and protect aquatic habitat during normal or low flow.

Potential benefits of ecologically friendly techniques:

- Often times more affordable;
- Vegetation filters runoff water before it enters channel;
- Improved wildlife and aquatic habitat function;
- Provides ongoing carbon/organic matter to stream and riparian systems; and
- Aesthetically pleasing.

Potential problems of such techniques include:

- Increased chance of failure under extreme flow events;
- Failure of vegetation to establish may require repeated, extended installation activities;
- May require an increased level of routine maintenance; and
- Increased potential for introduction of foreign habitat and or invasive species.

The length of the setback component under Alternative 2C is not defined in the FFS or Proposed Plan. Currently, the west side of the Willow Boulevard site has an approximately 20 foot setback, which was constructed during the Interim Action. The existing 20 foot setback adequately protects the Willow Boulevard site in the backwater area located on portions of the north and west banks, and should provide sufficient protection against expected future erosional forces. The length of setbacks along the north and east sides of the Willow Boulevard site will be determined during remedial design by assessing bank stability during a 24-hour 25 year rainfall event. The setback length will be presented in the Remedial Design.

Additional Investigation at AMW-3A Area

The Proposed Plan states "the soil in the area near monitoring well AMW-3A may pose an unacceptable risk to people and wildlife…, but this area needs further study." The AMW-3A area has been thoroughly characterized by collecting and analyzing 18 surficial soil and 47 subsurface soil samples, in both the residentially-zoned and industrially-zoned areas. Data from AMW-3A area soil samples is presented on Figure 18 and Table 4-6A and 4-6B of the RI/FFS.

The surficial soil data for the residential area near the AMW-3A yielded an arithmetic mean of 0.18 mg/kg PCBs with a 95% upper confidence limit (UCL) of 0.48 mg/kg. The surficial soil sample data for the industrially-zoned area of AMW-3A yielded an arithmetic mean of 1.86 mg/kg PCBs, and a 95% UCL of 2.81 mg/kg. In both cases the arithmetic 95% UCL PCB concentration is less than the Part 201 Generic Direct Contact Cleanup Criteria and Screening Levels of 4 ppm and 16 ppm in soils of the residential and industrial zoned areas, respectively. Based on these data, there is no unacceptable risk to human health and the area has been sufficiently investigated. We request that the ROD delete the reference to the need for more investigation and the suggestion that the area around AMW-3 may pose an unacceptable risk.

Groundwater

The Proposed Plan should not specify a contingent groundwater remedy, but adopt an approach consistent with that used for the King Highway Landfill Operable Unit (KHL-OU).

The Proposed Plan makes no mention of risks related to groundwater; nevertheless the document includes provision for a groundwater remedy should future groundwater monitoring indicate the presence of contaminants at unacceptable levels. Inclusion of a contingent groundwater remedy as an element of the Proposed Plan is contrary to agreements[1] (attached) by the MDEQ to develop a ROD for the WB&A-OU with the same approach to addressing groundwater as that identified in the KHL-OU ROD. The ROD should specify only that groundwater monitoring will be conducted as part of the remedy. The monitoring program in the Hydrogeological Monitoring Plan should include a contingency plan that identifies a range of potential response actions should contaminants in groundwater samples exceed risk-based criteria. These response actions may include review of groundwater sampling protocols and/or well installation and development methods, statistical analysis of groundwater sample data, re-sampling of existing monitoring wells, installation and sampling of additional monitoring wells, evaluation of risks to groundwater, or other actions that may include implementing an engineered groundwater remedy. Under any circumstance, the detection of groundwater contamination at concentrations exceeding target criteria should not immediately trigger a groundwater remedy. We recommend that the agreed-upon course be followed.

We request that you include these comments in the administrative record. If you have any questions or would like to discuss this further, please do not hesitate to call me at (508) 992-3609 x 15.

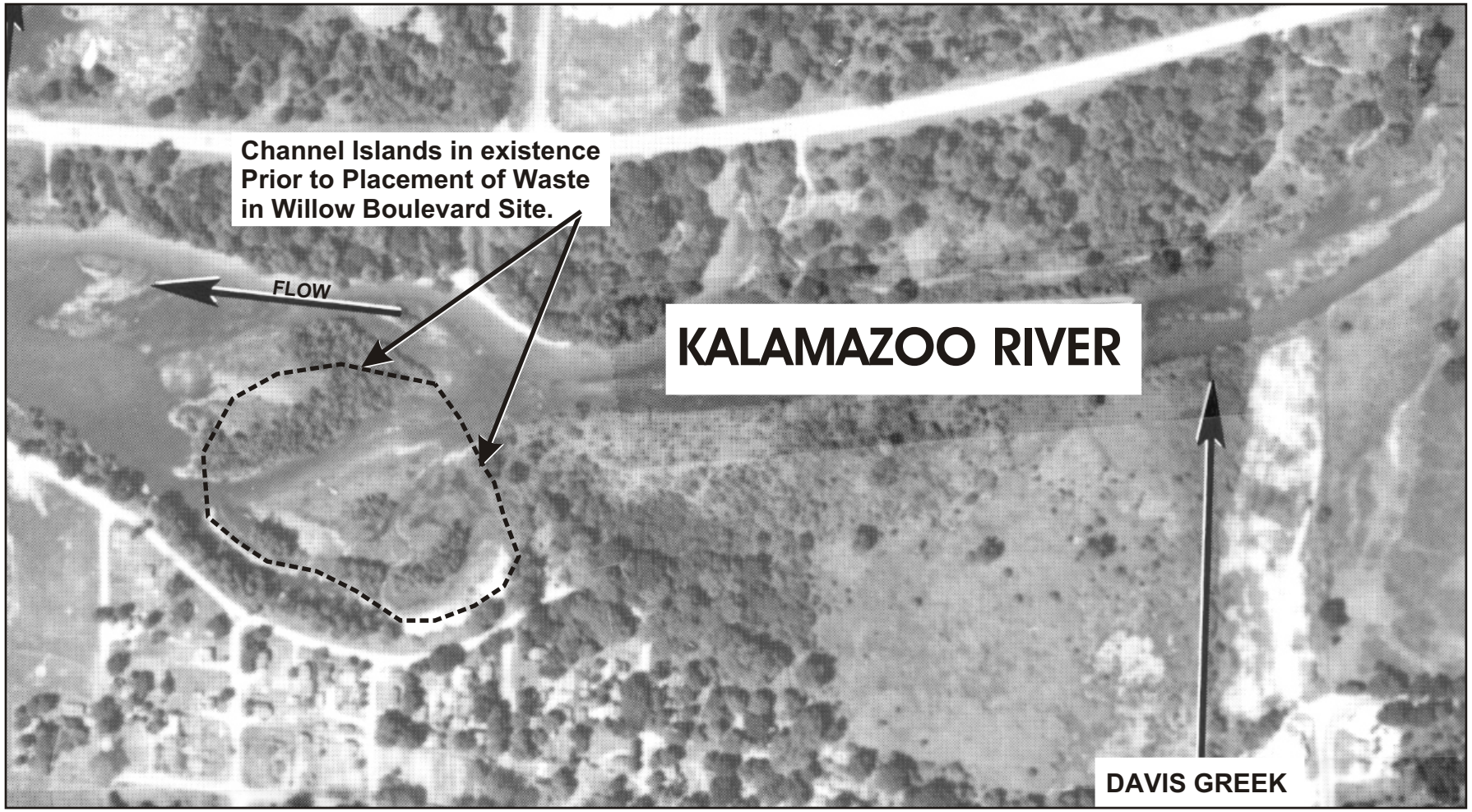
Sincerely,

BLASLAND, BOUCK & LEE, INC.

Mark P. Brown, Ph.D.
Senior Vice President

Attachments
DKC/dmn
cc: Steven D. Cook, Esq., Lyondell Chemical Companry
J. Michael Davis, Esq., Georgia-Pacific Corporation
David R. Guier, P.E., Lyondell Chemical Company
Paul A. Montney, P.E., Georgia-Pacific Corporation
Bonnie A. Barnett, Esq., Drinker, Biddle & Reath LLP
Joyce S. Schlesinger, P.E., ENVIRON
Patrick N. McGuire, Blasland, Bouck & Lee, Inc.

[1] January 23, 2001 meeting, as documented in a letter from BBL to MDEQ dated January 31, 2001.



NOTE: 1950 AERIAL PHOTOGRAPH.

LEGEND:

---------- Approximate boundary of Willow Boulevard Site.

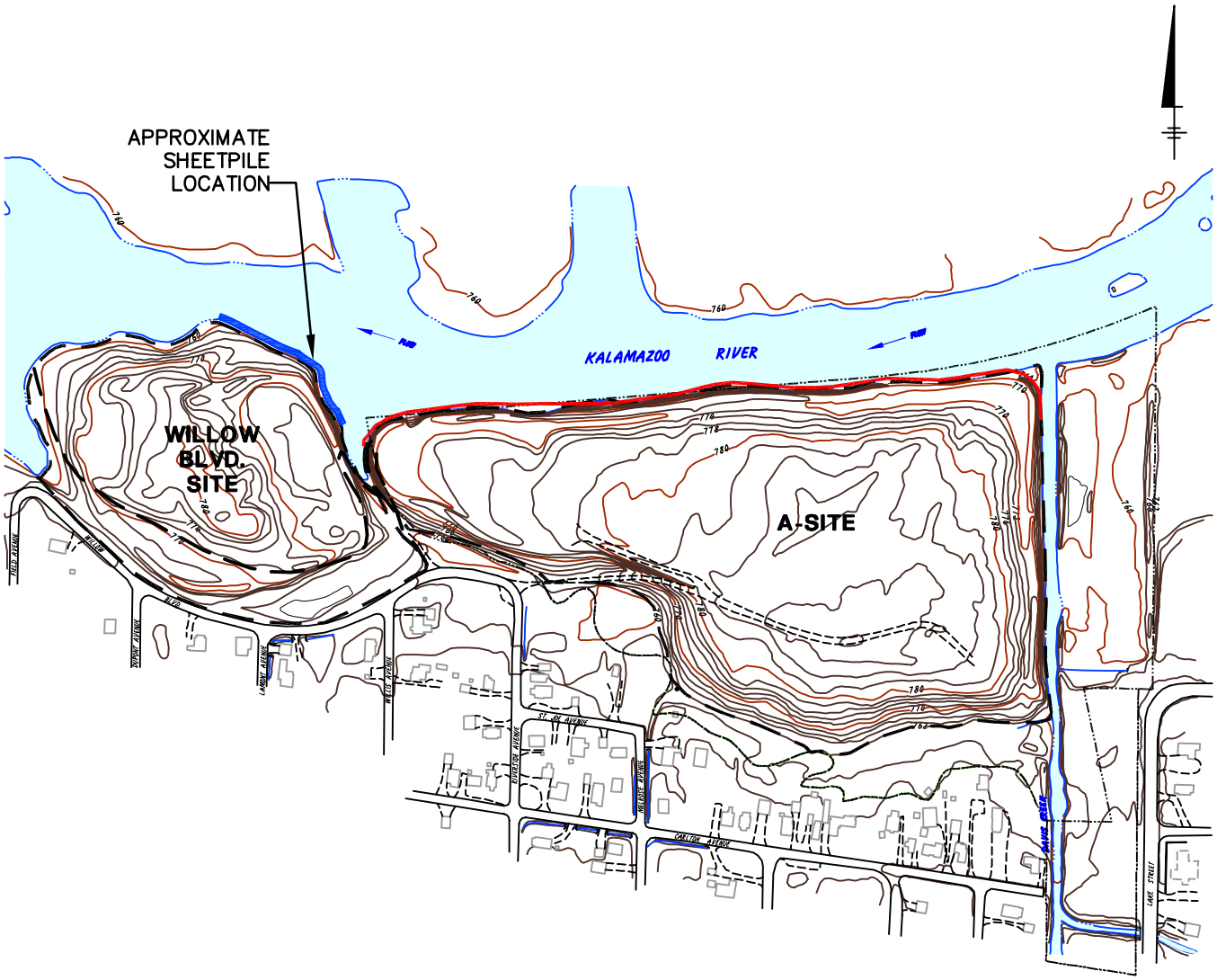
KALAMAZOO RIVER STUDY GROUP PORTAGE CREEK
KALAMAZOO RIVER SUPERFUND SITE
WILLOW BOULEVARD/A-SITE

PRE-EXISTING CHANNEL ISLANDS

BBL®
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE 1

9/09/05 SYR-D54-KLS
64582690/64582T01.cdr



LEGEND:

- ELEVATION CONTOUR (NGVD 1929)
- EDGE OF WATER OR DRAINAGE CHANNEL
- UNPAVED ROAD/TRAIL
- APPROXIMATE A-SITE BOUNDARY
- GEORGIA-PACIFIC PROPERTY BOUNDARY OUTSIDE OF A-SITE
- EXISTING SHEETPILE WALL
- APPROXIMATE SHEETPILE WALL

0 400' 800'

GRAPHIC SCALE

NOTES:

1. TOPOGRAPHIC MAPPING PRODUCED USING PHOTOGRAMMETRIC METHODS BY LOCKWOOD, INC. FROM AERIAL PHOTOGRAPHY FLOWN APRIL 1991. KALAMAZOO RIVER SOUTH BANK, EAST OF DAVIS CREEK REVISED PER CURRENT CONDITIONS. ADDITIONAL TOPOGRAPHIC CHANGES AFTER APRIL 1991 ARE NOT SHOWN.

KALAMAZOO RIVER STUDY GROUP ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE

PRELIMINARY RECOMMENDED ALIGNMENT OF SHEETPILE

WILLOW BOULEVARD / A-SITE AND ANCILLARY AREAS

BBL BLASLAND, BOUCK & LEE, INC. engineers, scientists, economists

FIGURE 2

X: 64582X01, X03.DWG
P: PAGESET/PLT-AP1
9/16/05 SYR-85-KLS
64582690/64582G01.DWG

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Transmitted Via Facsimile and U.S. Mail

January 31, 2001

Mr. J. Brian von Gunten
MDEQ-ERD
Superfund Section
Knapps Centre - Mezzanine Level
PO Box 30426
Lansing, MI 48909-7926

Re: Willow Boulevard/A-Site RI/FFS
Project #: 645.81/82.500/600

Dear Brian:

By way of this letter, we are confirming agreements reached at our January 23, 2001 meeting in Lansing, Michigan. Agreements reached at this meeting include:

- No remedial alternatives will be developed for groundwater, regardless of PCB results from recent groundwater sampling;
- Any remedial issues related to groundwater will be addressed in the Record of Decision for the Operable Unit and will consist of a contingency plan in the event that PCBs are detected in perimeter wells during long-term monitoring of groundwater (consistent with the approach taken at the King Highway Landfill Operable Unit – i.e., contingency plan will be described in a Hydrogeologic Monitoring Plan); and
- Given these agreements, a working draft (inclusive of MDEQ comments and highlighted changes to the document) of the RI/FFS will be submitted to the MDEQ within 45 days.

If you do not concur with these agreements, please call me as soon as possible.

Sincerely,

BLASLAND, BOUCK & LEE, INC.

Patrick N. McGuire
Associate

PNM/tld

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cc: Alan J. Howard, P.E., MDEQ-ERD
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MODE = MEMORY TRANSMISSION START=JAN-31 16:07 END=JAN-31 16:08

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NO.	COM	ABBR/NTWK	STATION NAME/ TELEPHONE NO.	PAGES	PRG.NO.	PROGRAM NAME
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-BLASLAND BOUCK LEE 2ND FL-

********** -SYRACUSE - ***** - 315 445 9161- **********

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To:	J. Brian von Gunten MDEQ-ERD	**Fax #:**	517-335-4887
Date:	January 31, 2001	**Pages:**	3, including cover page.
From:	Patrick N. McGuire		
Subject:	Willow Boulevard/A-Site RI/FFS Project No.: 645.81/82.500/600		

COMMENTS: Please see the attached.

IN CASE OF TRANSMISSION PROBLEMS, PLEASE CONTACT LISA POSENAUER @ 315-446-2570, EXT. 254